

Blind Angle of Chinese Estoppel Doctrine: Implicit Disclaimer but Double Benefits of Doubt:

Comments on Supreme People's Court's Civil Judgment No. Mintizi 306/2001*

He Huaiwen

Introduction

The Chinese Patent Law does not set forth express provisions relating to “estoppel doctrine”. This doctrine has been developed in judicial practices, and affirmed by the Supreme People's Court's Interpretation of Several Issues Relating to Application of Law to Adjudication of Patent Infringement Disputes (Interpretation on Patent Infringement). It comes into play in case of narrowing amendment or observations, and works to the effect that “technical solution surrendered” may not be asserted as part of the scope of patent protection in infringement litigation.¹ In *Zhongyu Elec. Ltd., Co. v. Shanghai Jiuying Tech. Ltd., Co.* (*Zhongyu case*),² the Supreme People's Court made it clear that “said surrender is the patentee's voluntary surrender by virtue of amendment or observations”; and that the estoppel doctrine purports to prevent patentees from obtaining “double benefits of doubt”: benefits from a patent examiner's reliance on his narrowing amendments or statements in permitting the application, and benefits from courts' reliance on the doctrine of equivalents in permitting him to reclaim the surrendered territory of patent protection.³

However, where the patentee did not disclaim anything explicitly, he might still do so implicitly. In this event, if the estoppel doctrine does not apply, the patentee can easily make “double benefits of doubt”. In this paper, I shall first discuss the *Zhongyu case*, and then deal with “implicit disclaimer” in view of U.S. leading cases. Given the volume and the quality of Chinese patents, it is argued that the estoppel doctrine should be applied strictly. Where the subject matter is reasonably foreseeable, but is not claimed by the patentee in patent prosecution, he should not be allowed to reclaim it

through the doctrine of equivalents in infringement litigation for the purpose of ensuring the public notice function of claims.

I. Explicit disclaimer and estoppel: *Zhongyu case*

The *Zhongyu case* is an archetypical example of the Chinese estoppel doctrine at work only in event of explicit disclaimer. In this case, Tian Yu and Jiang Wenyan were granted a patent (ZL 2007 20069025.2) for the utility model of “a steering engine”, and Zhongyu Elec. Ltd., Co. (Zhongyu) was licensed exclusively to exploit the patent in China. Zhongyu sued the Shanghai Jiuying Tech. Ltd., Co. (Jiuying) for infringement, in particular, of Claim 3. Claim 3 was dependent on claim 2, which, in turn, depended on claim 1. Claim 3 cited features not present in claim 1 or 2, one of which was that “on the drive circuit board are printed bar-shaped carbon membrane and silver membrane” (Feature G). This feature was a point at issue in the case.

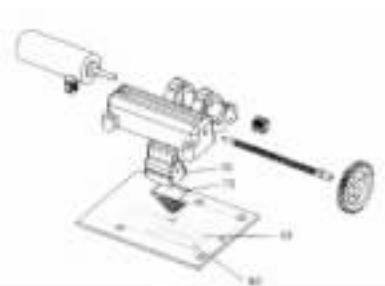


Fig. 1 “A steering engine (ZL 2007 20069025.2)

During the infringement litigation, the defendant filed a request with the Patent Reexamination Board (PRB) for declaring the patent in suit invalid. The PRB held claims 1, 2

and 4 to 6 invalid, and kept claim 3 valid. In ensuing administrative lawsuits, the PRB's decision was affirmed by the reviewing courts.

In the instant infringement litigation, the court of the first instance commissioned forensic evaluation. In the forensic opinion, it was held that feature g contained in the allegedly infringing product ("on the circuit board of said drive circuit board are printed one bar-shaped carbon membrane and gold-plated *copper* strips") was equivalent to the feature G in claim 3; and that the allegedly infringing product had all the other features cited in claim 3.

In the second instance, the Shanghai Higher People's Court held, however, that to feature G, the estoppel doctrine should apply, and feature g of the allegedly infringing product was not covered by the patent. The court noted that claim 3 was maintained as valid because the additional features in claims 2 and 3 were added to claim 1 to the effect that original claim 1 was amended. Among the limitations of claim 3, feature G was an additional one essential to the validity of the patent. Under Article 6 of the Interpretation on Patent Infringement, where a patentee who disclaimed subject matters by virtue of amending claims asserted patent protection for the disclaimed subject matter in infringement litigation again, the court may not support him. Feature G characterised specifically the conductive bar on the drive circuit board of the steering engine as "silver membrane". On account of this specific limitation, the patentee disclaimed all technical solutions of the conductive material, other than "silver membrane"; and the patent no longer covered the accused feature "gold-plated copper bar". Accordingly, the court concluded that the accused product was not infringing.

Upon reviewing on Certiorari, the Supreme People's Court found above opinion inapposite. The court actually decided that feature G was a new feature to which the estoppel doctrine was inapplicable. The court pointed out that only amendment to claims and specification, or observations during prosecution could implicate "surrender" and trigger estoppel doctrine. In the instant case, the original independent claim was declared invalid, and the patent was kept valid for a dependent claim. In effect, the dependent claim took the place of the previous independent claim, and its scope of protection did not change at all. Every claim cited an independent and complete technical solution; and the scope of protection of the dependent claim should not be considered narrowed simply because the claim to which it

was subsumed had been declared invalid. Where the PRB declared an independent claim invalid, but kept the patent valid for its dependent claim(s), absent voluntary disclaiming on the part of the patentee, the courts should be cautious about establishing "surrender" in applying the estoppel doctrine. Where the feature in the dependent claim was a new feature, not narrowing preexisting features in the independent claim, it may not be presumed that all equivalents to the new feature had been surrendered, for there was no point of reference for its original coverage. Accordingly, the Court reversed the judgment below.

II. Implicit disclaimer, but double benefits of doubt: "blind angle" of estoppel doctrine

The *Zhongyu* case comported with the Supreme People's Court's precedents, which required presence of explicit disclaimer for the estoppel doctrine to apply. Where the patentee deleted, on his own initiative, the independent claim in the invalidation proceedings and rewrote a dependent claim, comprising a feature subordinate to one limitation in the original independent claim, into a new independent claim, the court applies the estoppel doctrine. For example, in *San'an v. Beijing Shiyituo* (*San'an* case), the defendant also filed a request with the PRB, and submitted a prior art which disclosed a technical solution comprising electric motor as a driving device. During the invalidation proceedings, the patentee cancelled claims 1 and 2, and rewrote claim 3 into a new independent claim to secure novelty and non-obviousness of the disputed patent. The Supreme People's Court held that by said amendment (that is "rewriting"), the patentee had already surrendered the technical solution and might not reclaim "electric motor" as part of the scope of the patent in the patent infringement litigation.⁴ In the instant case, however, the patentee did not amend the claims on his own in the patent invalidation proceedings: the PRB declared claims 1 and 2 invalid according to the evidence presented, and maintained claim 3 valid because no evidence available prejudiced its validity. Claim 3 thus became an independent claim. As such, the patentee itself did not disclaim any scope of protection in the invalidation proceedings. There seems no conflict between *Zhongyu* case and *San'an* case.

But this does not mean that where there is no explicit

disclaiming, there is no unfair “double benefits” for a patentee. Take the present case for example. When filing the application, the patentee claimed specifically “a bar-shaped carbon membrane and silver membrane”. For an ordinary person skilled in the art, the patentee should have reason to foresee that there were conductive materials, other than “silver”, which could fulfill equivalent function. But he refused to include them in the claim. After the patent was granted and published, the public was required to carry on commercial activities in reliance on the claim which gave the public notice of the protected subject matter. To avoid infringement, they should either refrain from the business or design around the “bar-shaped carbon membrane and silver membrane”. In the patent invalidation proceedings, the PRB maintained the patent valid also in good reliance on this specific limitation. In the patent infringement litigation, however, the patentee asserted that the patent still covered the technical solution comprising conductive materials, other than “silver membrane”. In this event, if such assertion was allowable, double benefits were granted to the patentee, and punishment was imposed on the public for their justified reliance on claims.

In short, a patentee should be held to the specific limitation in the claim where he, knowing that he could claim a wider scope of protection in prosecution, resorted to a specific limitation narrowing the claim, and the patent examiner granted him a patent in reliance on the limitation. Otherwise, the patentee will be allowed double benefits of doubt in prosecution and litigation. If so, there would be no way for us to realise the objective of the estoppel doctrine: ensuring stable scope of protection of the patent and safeguarding public reliance in patent claims.⁵

III. Implicit disclaimer and estoppel doctrine: leading U. S. cases

In the United States, where the equivalent doctrine and estoppel doctrine were first developed, the doctrine of equivalents is restricted by the estoppel doctrine, the application of which turns on the foreseeability on the part of the patentee in amending specification. Actually, this doctrine was reshaped at the turn of this century. The U. S. courts decided not to look at what subject matter the patentee had voluntarily surrendered in applying the estoppel doctrine anymore. Rather, they determined that it was a better doctrine if that subject matter was surrendered when the patentee should

have foreseen, but refused to claim, it. That is, implicit disclaiming counts for “surrender” for the purpose of prosecution estoppel doctrine.

This doctrinal shift is demonstrated in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*(en banc).⁶ The issue before the Court of Appeals for the Federal Circuit (CAFC) was how to determine the scope of protection surrendered by the patentee by narrowing claim. That is, if there was narrowing amendment, to what extent the doctrine of equivalents was applicable to the amended feature. The CAFC noted that “there is no precise metric to determine what subject matter was given up between the original claim and the amended claim”.⁷ While “the patentee would draw the line just at or slightly short of the prior art, leaving a wide range of equivalents untouched by prosecution history estoppel...”. The accused infringer, however, would draw the line close to the literal terms of the claims, leaving little or no range of equivalents”. To enhance legal certainty, the CAFC held that a complete bar should apply to the effect that “there is no range of equivalents available for the amended claim element”.⁸

The U.S. Supreme Court reviewed the case. While the Court rejected the complete bar,⁹ it recognised that the patentee should know the difference in coverage between the original claim and the amended claim, and thus might disclaim implicitly. In the Court’s opinion, the reason that the doctrine of equivalent was good beside literal infringement was that the patentee could not be reasonably expected to capture his invention with complete precision for limitations on his foreseeability and language. “If patents were always interpreted by their literal terms, their value would be greatly diminished. Unimportant and insubstantial substitutes for certain elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying”.¹⁰ But when the patentee was amending the claim, the premise was no longer good. “The prosecution history established that the inventor turned his attention to the subject matter in question, knew the words for both broader and narrower claim, and affirmatively chose the latter”.¹¹ Therefore, “the patentee’s decision to narrow his claims through amendment may be presumed to be general disclaimer of territory between the original claim and amended claim”,¹² unless he proved: “(1) The equivalent may have been unforeseeable at the time of the application; (2) the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or (3) there may be some other

reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.”¹³

In line with *Festo*, the CAFC has acted to enhance public notice of claims, and withhold the doctrine of equivalents where subject matter is implicitly disclaimed, regardless of whether the patentee amended the original claims or not. In *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys. Inc.*¹⁴, the CAFC held that “by defining the claim in a way that clearly excluded certain subject matter, the patent implicitly disclaimed the subject matter that was excluded and thereby barred the patentee from asserting infringement under the doctrine of equivalents.” In *Bicon, Inc. v. Straumann Co.*¹⁵, the CAFC explicitly adopted the so-called “specific exclusion doctrine”, making clear that where a term in a claim was specific and clear, the doctrine of equivalents should not apply. The claim in dispute read “the abutment has a frusto-spherical basal surface”; and the allegedly infringing product had an “abutment frusto-conical”. The CAFC held that “the claim recites a particular shape for the basal portion of the abutment that clearly excludes distinctly different and even opposite shapes”, and thus doctrine of equivalents was not applicable.¹⁶ The court highlighted that “allowing a patentee to argue that physical structures and characteristics specifically described in a claim are merely superfluous would render the scope of the patent ambiguous, leaving examiners and the public to guess about which claim language the drafter deems necessary to his claimed invention and what language is merely superfluous, nonlimiting elaboration”; and this would make the scope of patent protection extremely uncertain.¹⁷ Similar doctrines are recognised in the U.K. and Japan.¹⁸ The rationale is simple: the patentee should have foreseen the specifically excluded subject matter, and thus implicitly disclaimed it by inaction. Such subject matter never undergoes substantive examination; and therefore protection allowed under the doctrine of equivalents must unfairly grant double benefits of doubt to the patentee.

Where new features are added in a dependent claim which is rewritten into an independent claim, like the fact pattern in the *Zhongyu* case, the implicit disclaimer doctrine also applies. In the *Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.* (en banc)¹⁹, the CAFC pointed out that “addition of a new claim limitation can give rise to a presumption of prosecution history stoppel, just like an amendment that narrows a preexisting claim limitation”. The cancellation of an independent claim, along with rewriting a dependent claim into inde-

pendent form, was adding a new claim limitation which might give rise to an estoppel. The fact that “the scope of the rewritten claim has remained unchanged will not preclude the application of prosecution history estoppel if, by cancelling the original independent claim and rewriting the dependent claims into independent form, the scope of subject matter claimed in the independent claim has been narrowed to secure the patent”. Otherwise, “... astute practitioners could, through clever claim drafting, elect to treat most, if not all, amendments as merely adding new claim limitations, rather than narrowing preexisting ones”. Obviously, this holding is similar to that of the Shang Higher People’s Court in *Zhongyu* case.

In sum, regardless of whether the patentee amended the original claims or not, the U. S. courts may restrict the application of the estoppel doctrine depending on whether the patentee should have foreseen the equivalents in dispute.

IV. Reforms in Chinese Patent Law

Under the existing law provision, there seem to be no substantial defects resting with the *Zhongyu* case. Nevertheless, when observing the Supreme People’s Court’s disregarding the specific and clear limitation “silver membrane”, the general public might well question the public notice of patent claims. Undoubtedly, a person skilled in the art must have foreseen that there were equivalent conductive materials to “silver membrane” (for instance, a copper strip). The patentee, however, failed to claim such equivalents, thus disclaiming them implicitly. Should the patentee assert once again the disclaimed subject matter in infringement litigation, the court should not support it. Otherwise, the justice fulfilled through doctrine of equivalents for the patentee is done at unfair and expensive prices of the public’s innocent reliance on patent claims.

Patents are not granted to all high-quality inventions that are worth the protection through doctrine of equivalents at the price of public reliance on patent claims. In 2011, the Organisation of Economic Cooperation and Development (OECD) developed the Patent Quality Index, and issued the Science, Technology and Industry Scoreboard 2011, a report showing that the past decade saw a general drop in patent quality worldwide.²⁰ It was reported that patent grant rate of the EPO and the Japanese Patent Office reached as high as 60-80%, and that of the United States even 95-97%.²¹

There was drastic increase in patent applications, on the one hand, and there was limited capacity of examining, on the other. Backlog was serious, examining period is considerably extended,²² and patent quality is deteriorating.

China is an emerging economy, with ever growing capacity for innovation. Chinese patent quality, however, looms large. These years, USPTO has issued no more than 300,000 patents in total;²³ the State Intellectual Property Office of China annually issues more than 400,000 utility model and invention patents.²⁴ Suppose 5% of these Chinese patents are litigated. In the foreseeable future, Chinese courts will receive 20,000 more patent cases each year. According to the China's Annual IP Protection Whitepapers, new patent cases received by court of first instance are now increasing at a rate of 30% annually.²⁵

In recent years, the U.S. and the EU have been keeping a close eye on patent quality, highlighting the public notice function of patent claims. Reforms are brewing. Between 2011 and 2012, the Economic and Scientific Advisory Board of the EPO held a series of symposiums, naming patent quality one of the three major themes. In February 2013, the Board issued the Recommendation for Improving Patent System, advocating for enhancing patent quality.²⁶ The U. S. acted even earlier. In 2003, the U. S. Federal Trade Commission underscored patent quality in the famous report entitled "To Promote Innovation: the Proper Balance of Competition and Patent Law and Policy".²⁷ In 2011, the Commission again held an intensive hearing. Public notice function of patent claims was once again underlined in the report "The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition".²⁸

The U. S. courts took its actions even earlier to address the patent quality problems. The discussion on the U. S. leading cases shows that a decade ago, the CAFC started to cut back on doctrine of equivalents, strengthen estoppel doctrine, and uphold public notice of claims. Specifically, the U. S. courts adhere to two principles: "ensuring that the patentee enjoys the full benefit of his patent and ensuring that the claims give "fair notice" of the patent's scope".²⁹

In China, a huge number of patents are granted annually,³⁰ with varied quality. Courts should take precautions in case lax application of doctrine of equivalents would undermine public notice function of patent claims. In that event, the public will be imposed heavy burden in staying away from infringement and run great risk in designing around. Patentees should not be condoned where it is reasonable to

expect them to do things right; the public should not be punished for good reliance on words and terms of patent claims. In fact, the Supreme People's Court is taking action. In 2009, in the Opinions on Several Issues Relating to IPR Adjudication in Service of General Situation under the Current Economic Situation (Fafa No. 23/2009), the Supreme People's Court took the position that "courts should apply the doctrine of equivalents strictly, improve the standard, and should not improperly broaden patents' scope". In the late 2011, in the Opinions on Several Issues Relating to Bringing IP Adjudication into Full Function to Spur Major Development and Prosperity of the Socialist Culture and Promote Coordinated Development of Economy (Fafa No.18/2011), the Supreme People's Court noted that courts should faithfully apply the all elements rule, estoppel doctrine, dedication doctrine and so on, and improve the standards for applying the doctrine of equivalents.

Actually, the Supreme People's Court recognised implicit disclaiming, regardless of whether the patentee amended original claims or not, thus defeating patentees' efforts to gain double benefits of doubt. In *Dalian Xinyi Building Material Co., Ltd. v. Dalian Renda New Wall Building Material Plant*,³¹ the claim of the disputed utility model patent read: "a thin concrete barrel-shaped construction member ... characterised in that said barrel bottom is made by overlapping at least two layers of glass fibre cloth ...". The barrel bottom of the allegedly infringing product, however, was made of "one layers of glass fibre cloth", other technical features being identical with those of the claim. The courts of first instance and second instance both held that the doctrine of equivalents was applicable and there was infringement. The Supreme People's Court held otherwise, however. The Court underscored that the scope of protection of a utility model patent shall be determined according to the claims, the interpretation of which can make reference to the specification and drawings. The claim in suit cited specifically and clearly "at least two or more layers" and the specification mentioned that the overlapping layers of the glass fibre cloth "can be as few as only two layers". Consequently, the claim should not be construed as disregarding this specific limitation. Otherwise, it was tantamount to deleting "at least two or more layers" from the claim, unreasonably broadening the scope of protection of the patent to the detriment to public interests. In addition, the Supreme People's Court pointed out that alkaline-resistant glass fibre cloth was in existence at the filing date, and the applicant should have known about it. In spite

of this knowledge, the patentee chose the limitation “at least two or more layers”. It was thus untenable that doctrine of equivalents should apply because of unforeseeable technological progress in glass fiber cloth.

This line of reasoning was not followed, however. *Zhongyu* case could send the public a discomfiting message: the scope of patent protection demonstrated by patent claims can be unreliable and sidestepped by virtue of doctrine of equivalents. It should bear in mind, however, that the public notice function of patent claims is of very paramount social value. The public need to be informed of clear boundaries of patents so as to arrange for their daily business. If such boundaries could only be drawn by litigation, enterprises will be unduly burdened, and run great legal risks. Therefore, reform is in order. The blind angle of the Chinese estoppel doctrine should be eliminated. Patentees should be asked to pay for their intentional or unintentional negligence in drafting bad claims. Any subject matter which they had reason to foresee, but failed to claim should be deemed as disclaimed implicitly, and would thus be impossible to be reclaimed in patent litigation. ■

The author: Guanghua Law School of Zhejiang University, PhD in Laws Graduated from Peking University Law School, e-mail: zjuhwh@gmail.com

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¹ Article 6 of Supreme People’s Court’s Interpretation of Several Issues Relating to Application of Law to Adjudication of Patent Infringement Disputes (Fashi No. 21/2009).

² The Supreme People’s Court’s Gazette, 2012, No.10, issue 192.

³ *Zhongyu Elec. Ltd., Co. v. Shanghai Jiuying Tech. Ltd., Co.*, the Supreme People’s Court’s Civil Judgment No. Mintizi 306/2001.

⁴ The Supreme People’s Court’s Civil Judgment No. Minshengzi 870/2010.

⁵ See id.

⁶ 234 F.3d 558 (Fed. Cir. 2000).

⁷ See id., at 77 (Fed. Cir. 2000).

⁸ See id., at 574 (Fed. Cir. 2000).

⁹ *Festo Corp. v. Shoketsu Kinzoku Kogyokabushiki Co.* 535 U.S. 722, 740-41(2002).

¹⁰ See id. at 731.

¹¹ See id. at 735.

¹² See id. at 740.

¹³ See id. at 740.

¹⁴ *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346 (Fed.Cir.2001).

¹⁵ *Bicon, Inc. v. Straumann Co.* 441 F.3d 945 (Fed.Cir.2006).

¹⁶ See id. at 955.

¹⁷ See id. at 950.

¹⁸ See Yan Wenjun and Yin Zongping, *Specific Exclusion Doctrine: A New Rule for Restricting Application of Equivalent Doctrine, the Intellectual Property Right*, 2013, Issue 1, P.39.

¹⁹ *Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131 (Fed. Cir. 2004) (en banc).

²⁰ The OECD’s The Science, Technology and Industry Scoreboard 2011.

²¹ Cecil Quillen, Ogden Webster, et al, “Continuing Patent Applications and Performance of the US Patent and Trademark Office – Extended”, 12 The Federal Circuit Bar Journal 35-55 (2002).

²² Take the U.S. for example, in the 20th century, the time for closing examination of a patent application was generally 19 months, and reached 34 months in 2010. See id.

²³ The USPTO, Patent Statistics: http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm.

²⁴ The SIPO’s Annual Patent Statistics Report 2011, available at: <http://www.sipo.gov.cn/ghfzs/ztjjb/jianbao/year2011/c/c1.html>.

²⁵ According to the Supreme People’s Court’s Whitepaper on Judicial protection of IP Rights, Chinese courts received 4,472 cases of patent disputes in 2009; 5,785 cases in 2010 (29% more than that of 2009); 7,819 in 2011 (75% more than that of 2009, and 35% that of 2010).

²⁶ The EPO Economic and Scientific Advisory Board, Recommendation for Improving Patent System, available at: [http://documents.epo.org/projects/babylon/eponot.nsf/0/835DA6DA218CB760C1257B2C004E809E/\\$FILE/ESAB_state-ment_en.pdf](http://documents.epo.org/projects/babylon/eponot.nsf/0/835DA6DA218CB760C1257B2C004E809E/$FILE/ESAB_state-ment_en.pdf).

²⁷ The Federal Trade Commission, To Promote Innovation: the Proper Balance of Competition and Patent Law and Policy, available at: <http://ftc.gov/os/2003/10/innovationrpt.pdf>.

²⁸ The Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (March 2011), available at: <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

²⁹ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.* 234 F.3d 558, 564 (Cir. Fed. 2000) (en banc).

³⁰ By December 2011, there had been 69,6939 valid invention patents, and 1,120,596 utility model patents. See Supra Note 24.

³¹ The Supreme People’s Court’s Civil Judgment No. Minsantizi 1/2005.